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AN EVALUATION OF THE WATERLOO-WELLINGTON ATTENDANCE CENTRE

by

Steven D. Brown

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An Evaluation of the Waterloo-Wellington Attendance Centre

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Abstract

Evaluation of the Waterloo-Wellington Attendance Centre

This report describes an evaluation of the Waterloo-Wellington Attendance Centre that is operated by the John Howard Society of the Region of Waterloo, Ontario. The Attendance Centre is a juvenile diversion program for children between the ages of eight and sixteen. The program involves week night sessions with a group of children for a period of eight to twelve weeks. Recreational and goal-oriented activities are stressed during these evening sessions. After twelve weeks, the juveniles are placed in appropriate community activities and follow-up is maintained for a period of one year.

The evaluation of the Attendance Centre focused on the recidivism of clients for up to an average of twenty-one months after referral. A quasi-experimental design was employed to develop three comparison groups drawn from the populations of "warned" juveniles, the populations of "charged" juveniles, and the population of juveniles participating in the Waterloo Diversion program. Subjects from these alternate streams were carefully matched to the characteristics and police histories of the sixty-one A.C. referrals.

The analysis revealed that the A.C. participants

performed marginally better than the other three groups on most indices of recidivism and significantly better on one -- the number of charges incurred within twelve months. Analysis of subgroups suggested that the comparative advantage of the A.C. is most apparent with higher risk juveniles -- those with prior charges or longer records, and those who are older.

A profile of the various treatment and comparison populations revealed predictable patterns for all groups in terms of gender (four fifths male), age (averages between 13.1 and 14.5 except for the A.C. at 11.5 years), prior record, and subsequent record. Regarding the last two characteristics, it is clear that prior record is a good predictor of subsequent recidivism for all populations. The "Warned" populations exhibited the least serious prior record and the least recidivism; the Diversion group was next in both categories as well; and the "Charged" populations exhibited both the most serious prior and the most serious subsequent records. The nature of the Attendance Centre population rendered it more similar to the "Charged" populations in terms of prior and subsequent records.

Résumé

Évaluation du Centre de fréquentation obligatoire de Waterloo-Wellington

Le présent rapport se veut une évaluation du Centre de fréquentation obligatoire de Waterloo-Wellington, dirigé par la Société John Howard de la région de Waterloo, en Ontario. Le Centre offre un programme de déjudiciarisation pour les jeunes âgés entre huit et seize ans. Pendant huit à douze semaines, le programme réunit un groupe de jeunes les soirs des jours ouvrables, leur offre des activités de loisirs et leur apprend à se fixer des objectifs. Après ces 12 semaines, les jeunes sont orientés vers des activités communautaires appropriées et bénéficient pendant une année d'un programme de suivi.

L'évaluation du Centre porte tout particulièrement sur les jeunes qui récidivent en moyenne dans les 21 mois qui suivent leur arrivée au Centre. En partant d'un concept tout à fait nouveau, on a choisi, à des fins de comparaison, trois groupes de jeunes: ceux qui ont reçu un "avertissement", ceux qui font l'objet d'une "accusation", et ceux qui participent au programme de déjudiciarisation des jeunes de la région de Waterloo. On a comparé minutieusement les jeunes de ces groupes avec 61 jeunes du Centre de fréquentation obligatoire, en se fondant sur leurs particularités et leurs antécédents avec la police, afin d'obtenir des groupes témoins valables.

L'analyse a révélé un comportement légèrement meilleur chez les jeunes du Centre que chez les trois autres groupes. Si pour l'ensemble des critères de récidive cette amélioration a été très légère, elle a été considérable pour un facteur particulier: celui du nombre d'accusations portées contre les jeunes en l'espace de 12 mois. Une analyse des sous-groupes a permis de constater que ce meilleur comportement des jeunes du Centre se manifeste surtout dans le cas des jeunes qui présentent des risques plus élevés, c'est-à-dire ceux qui avaient déja fait l'objet d'accusations, ceux qui ont des casiers judiciaires plus chargés et ceux qui sont plus vieux.

On a pu établir le profil des divers jeunes participant aux programmes et faisant partie des groupes témoins. Ce profil a révélé des types de comportement prévisibles chez tous les groupes, en fonction de leur sexe (4/5 de jeunes de sexe masculin), de leur âge (la moyenne se situe entre 13,1 et 14,5 ans, sauf pour les jeunes du Centre de fréquentation obligatoire dont la moyenne d'âge est de 11,5 ans), et de leur casier judiciaire avant et après leur participation au programme. En ce qui concerne le casier judiciaire, il est clair que celui antérieur au programme est un bon critère pour présager du risque de récidive chez les jeunes de tous les groupes étudiés. Les jeunes qui ont reçu "un avertissement" ont un casier judiciaire très peu chargé et accusent un très faible taux de récidive; viennent ensuite les jeunes faisant l'objet de mesures de déjudiciarisation et ce, dans deux catégories, tandis que les jeunes qui font l'objet d'une "accusation" ont les casiers judiciaires les plus chargés, tant avant qu'après avoir participé aux programmes.

En raison de sa composition, le groupe des jeunes participant aux programmes du Centre de fréquentation obligatoire ressemblait davantage à celui des jeunes faisant l'objet d'une "accusation" sur le plan des casiers judiciaires antérieurs et postérieurs à la participation aux programmes.

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Summary of the Research

This study reports the results of an assessment of the Waterloo-Wellington Attendance Centre based on its first two years of operation. In addition, the study provides a basic profile of four different populations in the juvenile criminal justice system representing four different treatment streams or alternatives.

The Waterloo-Wellington Attendance Centre

The Attendance Centre is operated through the John Howard Society of the Region of Waterloo. It began operation in January 1980, and has operated continuously from that date.

The Centre is a pre-charge early prevention program for children of both sexes between the ages of eight and sixteen. Children are normally referred by the Youth Bureau of the police department, and have at least one, but normally a number of prior offences on their police record.

Children participate in the program voluntarily. The program involves supervised evening sessions with a group of five to fifteen children five evenings a week for eight to twelve weeks. The evening sessions include a mix of recreational, enrichment and goal-oriented activities. A staff of two and a volunteer pool of about twenty provide one-to-one direction and supervision.

After the intensive part of the program has ended, staff members work with the children to find suitable placements in such community activities as sports groups or the Cubs or Scouts. Children are monitored by the staff for a period of about a year.

The program was originally funded jointly by the Consultation Centre of the Solicitor General of Canada, and by the Ontario Ministry of Community and Social Services. It is currently funded entirely by the latter institution.

Literature Relevant to the Attendance Centre Concept

The attendance centre concept represents one variation of the larger "diversion" movement in the juvenile criminal justice system. There is now a considerable body of literature pertaining to the effectiveness of the diversion process in general. This literature would seem to suggest that diversion as an alternative to further justice processing can have an impact on the subsequent recidivism of juveniles. However the global impact of such programs is, at this time at least, both marginal in magnitude and program specific. Moreover the reasons for the "success" of some programs are not always clear. There is a growing consensus among investigators of these processes that diverse programs in terms of approach and content will be necessary to "succeed" with different kinds of juveniles.

The attendance centre approach to diversion has been introduced in several Canadian communities besides Waterloo.

Two evaluations of these other projects provide no basis for a firm prediction or expectation about the project being assessed. In Hamilton, Ontario, court-referred participants in the program exhibited no reduction in recidivism relative to that of matched comparison subjects on regular probation. In Burnaby, B.C., however, the investigators reported a significant improvement in the self concept of program clients relative to matched comparisons.

Objectives and Design of the Evaluation

Initially the evaluation of the Attendance Centre was to be based on two criteria of effectiveness: the observed recidivism of clients relative to that of matched comparison subjects, and the observed changes in academic performance of clients relative to that of the same matched comparisons. The latter of these criteria was abandoned due to problems in locating subjects and assessing performance.

Information was collected for six juvenile populations in the Waterloo Region and Guelph jurisdicitons for the period between January 1980 and January 1982. The six populations of juveniles correspond to (1) the Attendance Centre participants over that period; (2) the participants in the Waterloo Diversion Program for that period; (3) those charged and processed for an offence in the Region of Waterloo at some time during the period; (4) those charged and processed for an offence in the City of Guelph; (5)

those warned or cautioned by police in Waterloo Region during that period; and (6) those warned or cautioned by police in the City of Guelph during the period. Because of their large numbers, the "Warned" populations were sampled randomly rather than examined in their entirety.

For each juvenile, age, sex, and residence information was documented as well as his or her history of police contacts to September, 1982. From these various treatment pools, subjects were selected who matched as closely as possible the background characteristics of the sixty-one Attendance Centre participants. In all, three matched comparison subjects were chosen for each A.C. client: one from the Diversion population, one from the appropriate "Warned" population (Waterloo or Guelph), and one from the appropriate "Charged" population. Each member of these matched groups was monitored for an additional five months to January, 1983 so that the minimum follow-up period for any subject was twelve months.

Analysis of Recidivism Among the Matched Groups

Four related measures of recidivism were used in the evaluation: charges incurred within twelve months, charges and warnings incurred within twelve months, charges incurred for the entire monitored period to January, 1983, and charges and warnings incurred for the entire period of monitoring.

Comparisons across the four groups revealed only small

differences for any of the recidivism measures. However the Attendance Centre group exhibited marginally better "success rates" for most of these indices, and significantly better rates compared to the other three groups on the "hardest" measure of recidivism -- the number of charges incurred within twelve months. Whereas the A.C. group recorded a "success rate" on the measure of 72.1 per cent (representing the percentage in the group free of charges after one year), the corresponding rates for the Diversion, "Warned", and "Charged" matched samples were 68.9 per cent, 65.6 per cent, and 63.9 per cent respectively.

Analysis of subgroups revealed that the Attendance Centre was most effective relative to the matched comparisons with higher risk juveniles - those with prior charges or longer records, and those who were older.

Finally the relative effectiveness of the Attendance Centre was more apparent in its second year of operation, although the differences here were not statistically significant.

Profiles of the Populations

Statistical profiles were provided for each of the six populations from which the matched samples were drawn. For the most part, the profiles exhibited the expected patterns and differences.

About four of every five juveniles in each population was male. With the exception of the Attendance Centre

group, the average ages of the groups ranged between 13.1 years (Guelph "Warned" sample) and 14.5 years (Waterloo "Charged" population). The A.C. clients were considerably younger than the others averaging about 11.5 years of age. The "Warned" populations had the lightest prior records, followed by the Diversion group (with 1.74 prior offences), the A.C. group (with 2.3 prior offences), the Guelph "Charged" group (3.19) and the Waterloo "Charged" population (4.62).

Differences with regard to recidivism tended to conform to the same pattern. Indeed it is apparent that prior record is a good predictor of future recidivism for all groups.

Conclusions

The research is clearly limited in its scope and design, and thus conclusions regarding the effectiveness of the Attendance Centre must be qualified. Nevertheless the evidence generated with this quasi-experimental design suggests that the Centre appeared to have some beneficial impact on its clients at least in the short term of twelve months. In addition, the Centre appears to register its comparative advantage relative to the alternate treatment streams with higher risk juveniles rather than with young first offenders.

1. Description of the Waterloo-Wellington Attendance Centre Program

Objectives. The Waterloo-Wellington Attendance Centre Program is a community-based early prevention program for children in conflict with the law. Operating through the John Howard Society of the County of Waterloo, the program is designed to provide an alternative to the laying of charges for children between the ages of eight and sixteen. As drawn from documents of the Centre, the major objectives of the project are as follows:

(1) to establish an intervention model in the Waterloo-Wellington area that maintains the juvenile in his natural setting of home, school, and community.

(2) to address problems of the juvenile within the setting of a daily peer group.

(3) to reduce the number of children entering the criminal justice system through intervention at the pre-charge level.

Program Components. The program model of the Attendance Centre has two complementary components. The first of these is an intensive program of recreational and personal goal-oriented activities supervised by trained staff each weekday evening over a period of eight to twelve weeks. For the summer months when school is not in session, a daytime regimen replaces the evening one.

Depending on the volume of referrals to the program, the number of children treated in any one cohort varies between five and fifteen. During the eight to twelve weeks of daily sessions, staff members of the Attendance Centre personally call for the children and drive them to the Centre's facilities which are located on the premises of a local school.

During the evening sessions which begin about 6:30 and end about 8:30, clients participate in a number of activities. Typically, the first half hour is devoted to group recreational activities in the gym; the next hour is spent with a volunteer working on an individual project; and the remaining time is devoted to a group recreational or enrichment activity. When school is in session, the individual projects may well pertain to academic upgrading. A member of the Centre's staff contacts the child's teacher to co-ordinate the Centre's activities regarding homework assignments and special tutoring.

The second component of the program attempts to help the child become involved in a positive way with the larger community. As the intensive part of the program is completed, the Attendance Centre staff work with the child and the child's family to develop placements in appropriate community activities. For example, children might be placed with organized sports groups, with theatre groups, or with the Cubs, Brownies, or Scouts. In addition, the staff may at this point refer the child to other community services

for longer-term treatment of particular problems. Finally, the staff have a program of aftercare monitoring of the child's progress for a period of at least a year. During this time, they stay in touch with the child and make their services available as necessary. Occasionally, a child will re-enter the intensive part of the program for another eight to twelve weeks, if this course of action seems advisable.

Referral and Intake. Children who have been referred to the program have normally had at least one, but probably a number of contacts with the police. As reported in a later section, the average child referred to the program in its first two years had about 3.3 prior charges or warnings in his or her police record. Typically the Youth Bureau of the relevant Police Department is responsible for the referral. Officers of the Youth Bureau consider referring children who, in their judgement, would benefit more from the Attendance Centre program than from other more formal options within the criminal justice system. It is difficult to be more precise in describing the referral criteria employed here. It appears from conversations with Youth Bureau personnel that the A.C. program is considered appropriate for children who seem to be developing a pattern of deviant or criminal behaviour, and for whom the intensive evening participation and interaction might prove beneficial. While most referrals have been from the police, the program in its first year of operation did accept some

referrals from nonpolice sources (parents, schools) and from officers of Probation and Aftercare.

To be acceptable to the program, the child must agree to co-operate with program staff. Participation in the program is voluntary. If the child is charged with an offence after being admitted to the program, he or she is not permitted to proceed.

Historical Development. The Waterloo-Wellinton Attendance Centre has been operating since January, 1980, with a professional staff of two and a volunteer staff of about twenty. The first year of its operation was largely a developmental stage for the program. Much of the staff's time during this period was devoted to determining the appropriate content of the program, to identifying the client population optimally suited to the program, and to developing community confidence and support for the program.

In its present form, the Attendance Centre offers about four or five 8-12 week sessions per year. Although it has an approved capacity of about seventy-five referrals per year, it may in future exceed that number by channeling more children directly into the second "placement" component of the program where this seems satisfactory.

Until 1983, fall, winter and spring sessions have been held in the Region of Waterloo (chiefly Kitchener), while the summer session has been held in Guelph. In future, financial constraints may limit the scope of the program to

the Region of Waterloo only.

For the first two and one half years of its existence, the Waterloo-Wellington Attendance Centre was funded jointly by the Ontario Ministry of Community and Social Services (which contributed 60 per cent of the funding) and the Consultation Centre of the Solicitor General of Canada (which contributed the remaining 40 per cent). Currently, the program is funded entirely by the Ontario Ministry of Community and Social Services.

2. Review of Literature Relevant to the Attendance Centre Concept

The attendance centre concept employed in this Waterloo-Wellington project is part of a general movement toward the use of alternate treatment strategies in the juvenile criminal justice system. Although terminology in this domain is far from precise, it is apparent that the concept represents one variant in the "diversion" process that has been introduced in numerous North American communities over the past two decades. Indeed, as described in the previous section, the mix of features in this program makes it one of the few that approximates the concept of "true diversion" advocated by leading theorists in the area (see for example, The President's Commission . . ., 1967; Cressey and McDermott, 1973; Rutherford and McDermott, 1976). Specifically, it is para-legal or non-legal in nature; it involves intervention normally after the juvenile has committed a criminal act; it is voluntary for participants; referral implies a cessation of justice system processing with no threat of further action in the event of noncompliance; and the program provides a limited range of direct services, as well as service referrals and follow-up.

In part because of its uncommonness, there is a relative dearth of available research concerning the effectiveness of this kind of program. In general, the extant body of relevant research yields little in the way of conclusions

that are not mixed, conflicting or equivocal in their implications.

In Canada, variations on this approach to diversion have been adopted in more than half a dozen communities across the country. Intensive participation in recreational, educational and life skills activities appears to be a common feature in programs adopted in the West Island communities of Montreal (Lajeunesse, 1979a), in the Hamilton Attendance Centre project (Lajeunesse, 1979b), and in a number of B. C. communities (Kissner and Zarchikoff, 1975; Zarchikoff and Crew, 1975). Two of these projects - in Hamilton and Burnaby - seem to have much in common with the Waterloo-Wellington model, and have been assessed as well.

The Hamilton Attendance Centre program is targeted for males between the ages of 13-15 who are living at home, who are on probation, but who are continuing to get into trouble. In effect, the target population for this program is the group of juveniles who are "not making it" on regular probation, and who appear headed for training school. Referral to the program is normally by the probation officer, after consultation with Attendance Centre staff. If the juvenile is deemed suitable, compulsory attendance at the centre is made a formal condition of probation by the Court.

On intake, an Attendance Centre staff member works with the juvenile to develop a set of concrete goals to be achieved during the program. Goals typically pertain to

school, self-development and community activities. Attendance at the Centre is every weekday evening (6:30 - 8:30 p.m.) for up to fifteen weeks. The duration of the program for any individual depends upon his rate of goal attainment. As with the Waterloo-Wellington experiment, evening activities involve both group and individualized components.

An evaluation of the Hamilton Attendance Centre by Byles (1981) produced negative, or at best, mixed results. The investigator compared the recidivism rates of fifty-six Attendance Centre referrals with the corresponding rates of a matched sample drawn from the regular probation stream. He reported that the treatment and comparison groups did not differ significantly in recidivism during a twelve month follow-up period. The researcher noted, however, that the Centre's program may actually have been successful in that its client population, which was apparently headed for training school, did not reach that destination in any greater proportion than the comparison probationers.

The Burnaby Attendance Centre (now defunct) was one of four similar projects operating in British Columbia during the 1970's. (The others were sited at Victoria, Port Alberni, and 100 Mile House.) The youths served by this program were between 12 and 17 years of age, and were drawn from both probation and pre-delinquent populations. Referrals were by probation officers and by sources outside the corrections field (schools, parents, Department of Human

Resources). Attendance in the program was voluntary.

The structure of the program was quite similar to the Hamilton and Waterloo-Wellington projects although attendance was limited to two evenings per week and one weekend outing per month. As with the other programs, evening activities included a recreation component, community outings, and group discussions. The duration of the program for each child was about three months.

Zarchikoff and Crew (1975) conducted an evaluation of this project in terms of its impact on clients' self concepts. They argued that several dimensions of self concept are empirically related to recidivism and represent useful subjective surrogates for the behavioural measure. Comparing pre- and post- measures of self concept for 23 A.C. participants and 22 comparison probationers, they reported a significant improvement in self concept for youths going through the program. Moreover they found that the Burnaby project was most effective with children from unstable home environments and with children having more serious police records. The investigators suggested that these client groups might respond best to the stabilizing effect of the intensive participation required of participants in the program.

Experience with the attendance centre idea outside of Canada has tended to be less relevant, and no more conclusive. In Britain, where the concept was first developed, a comprehensive evaluation of sixty such programs

found that the approach was effective only with "low risk" juveniles -- younger boys from stable homes and with little previous evidence of delinquency. However, it should be noted that these British programs were in many ways dissimilar to any of the Canadian projects discussed. In all cases, participation was court-ordered; the programs required client participation only for several weekends; and they tended to have a paramilitary orientation in terms of personnel and content.

In the United States, various forms of diversion have been implemented in hundreds of communities over the past fifteen years. For the latter part of this period, much attention has been paid to evaluating the success of these ventures, with the result that a myriad of studies are now available.

Despite this wealth of data, our understanding of the impact of diversion is still rather modest. As Moyer (1980) concludes from her review of recent literature "as a consequence of . . . conflicting and ambiguous results (often . . .from research that is methodologically flawed), it is not yet possible to make generalizations about the long term effects of diversion, as compared to system insertion or to release with no further action" (p. 171). As to short term effects, Moyer suggests that on balance the evidence indicates slight decreases in delinquent behaviour during and immediately after participation in the program (p. 170).

However, this conclusion does not apply indiscriminantly to the plethora of diversion approaches employed by different projects. Indeed, Romig's (1978) review of evaluative findings for each of various treatment modalities suggests that most of these approaches are ineffective. His "ideal" diversion program would eschew counselling approaches (individual, group and family) for ones that stress the child's development of study and life skills.

One of the problems in relating this general body of research to a discussion of the attendance centre concept stems from the fact that the "attendance centre" term is not commonly used in the American literature, and program descriptions tend to provide an inadequate basis for assessing the comparability of content and format. It appears from reviews of these programs that few American experiments have adopted the attendance centre format of daily after-school involvement over a relatively brief period. Most of the programs with a recreation or personal development format seem to involve less frequent contacts with clients (typically weekly) over a longer period (typically six months to a year).

A recent study by Palmer and Lewis (1980) provides a limited basis for discussing the effectiveness of some key features of the attendance centre program. These investigators examined fifteen diversion projects operating in the state of California. Although no one of these projects was comparable to the attendance centre, the

collective analysis did yield some findings of relevance.

Considered individually, the various projects were not very successful. In only three of eleven projects was recidivism found to be reduced in the short term (six months) relative to matched comparisons. Over the longer term of twelve and eighteen months, the number of projects recording a significant reduction fell to two and one respectively.

Examination of all projects combined, however, produced more positive results. On the whole, "diverted" youths did have significantly lower recidivism rates relative to the comparisons. This conclusion was found to apply specifically to juveniles with one prior arrest. Those without prior arrests performed no better than the comparison youths in almost all comparisons made. The authors suggest that a "ceiling effect" on success for these low risk juveniles may provide too little room for improvement. Their findings regarding high risk juveniles (those with two or more arrests) were less conclusive. While there were no overall differences in recidivism between high risk clients and comparisons, there were significant differences for these kinds of clients in the three "successful" projects.

Palmer and Lewis also examined the apparent effects on recidivism of exposure to different program elements. Contrary to Romig's (1978) findings, they reported that individual, group and family counselling did appear to be

effective treatment approaches. The program elements commonly found in attendance centre formats did not fare as well. The researchers reported no significant effects attributable to the use of tutoring, group education or recreation elements. It should be noted, however, that few youths in the California projects were exposed to these elements, and fewer still experienced these elements as their primary form of treatment.

Several recommendations of these authors regarding diversion alternatives have implications for community-based programs such as the attendance centres. Specifically, the authors recommend non-justice system voluntary programs as the first choice for virtually all kinds of referrals except high risk juveniles with two or more arrests. For these latter cases, they suggest that their first choice of program would be an involuntary non-justice system or community-based program.

In summary, the extant literature on diversion, while plentiful, yields few firm conclusions that might inform a discussion of the attendance centre alternative. In general, it appears that diversion of youths from the traditional court adjudicative process can and often does have a marginal impact on subsequent delinquency. There are some indications that the weak effects of diversion processes render most evaluations of individual programs inconclusive with regard to recidivism. That is, given the

small numbers associated with most of these programs, statistical significance of minor effects becomes difficult to attain.

The literature specifically addressing attendance centres is sparse indeed. While this kind of program has been implemented in a number of Canadian communities, only two studies appear to be directly relevant to its assessment. In Hamilton, Ontario, where Attendance Centre clients represented the more troublesome probationers, and were compelled to attend, no reduction in recidivism was found relative to a comparison group. In Burnaby, B.C., the client population was more similar to that found in Waterloo-Wellington, and the program was found to have have a significant impact on clients' self concepts relative to comparison subjects.

3. Research Design and Analysis

3.1 Objectives of the Research

The research reported here is designed to achieve two primary objectives. The first of these involves a limited evaluation of the impact of the Waterloo-Wellington Attendance Centre program on its clients. As originally conceived, the evaluation was to use two criteria of effectiveness: the success of the program in curtailing the child's subsequent involvement with the police; and the success of the program in affecting the child's subsequent academic performance. The latter of these two measures proved impossible to operationalize. Problems of tracing the location of many subjects, and of developing standardized measures of performance across subjects, classes and schools rendered comparisons incomplete in most cases and impossible in others. As a consequence, the research objective to evaluate the Attendance Centre is realized here only with regard to its effect on the child's subsequent involvement with the police.

The second objective of the research is to develop a profile of relevant juvenile populations in the criminal justice systems of Waterloo Region and the City of Guelph. In addition to the population of Attendance Centre referrals, three other populations were defined for examination: the population of those participating in the Region of Waterloo's Diversion Program; the population of

juveniles charged and processed through the Family Court Divisions of Waterloo Region or the City of Guelph; and the population of juveniles who had received a formal police caution or warning from the Youth Bureaus of the Waterloo Regional Police or Guelph City Police.

The populations to be examined here are drawn from the records for 1980 and 1981. The profile of each population is based on available demographic information about each child (age, sex, area of residence), and on each child's history of police contacts.

3.2 Development of Data Base for Treatment and Comparison Populations

To accomplish the objectives of the research, it was necessary to gather background and recidivism information for each of four populations in the juvenile criminal justice system. The four populations corresponded to the following groups:

(1) The population of referrals to the Waterloo-Wellington Attendance Centre from January 1st, 1980 to January 30th, 1982.

(2) The population of participants in the Waterloo Region Diversion program for a comparable period. The Diversion program offers some juveniles an alternative to court processing and sentence. Through the Probation and Aftercare Division of the juvenile

justice system, the juvenile can complete a program involving counselling and supervision in lieu of having his or her charge processed. Successful completion of the program over a number of months will result in termination of processing with no subsequent record.

(3) The population of juveniles charged with an offence for a comparable period to (1) above, in the Region of Waterloo and in the City of Guelph.

(4) The population of juveniles who received a formal police caution or warning during the period specified in (1) above in the Region of Waterloo or in the City of Guelph.

A number of different sources were used to develop a listing for each population. For the Attendance Centre, the Waterloo Diversion and the Waterloo "Charged" populations, the relevant "treatment" agency (the Attendance Centre, the Diversion Office, the Waterloo Region Family Court) served as the source of names and background information. For the Guelph "Warned" and "Charged" populations, monthly bulletins compiled by the Youth Bureau of the Guelph City Police Department provided the requisite listings. For the Waterloo "Warned" population, the card files of the Waterloo Youth Bureau served as the basic listing.

Information was gathered for the entire populations of all but the Waterloo and Guelph "Warned" groups. In the these latter cases, samples were drawn in a systematic random fashion. For the Guelph group, an alphabetic listing

was compiled of every juvenile warned during the requisite time period. Every third juvenile was selected into the sample so that a sample of 230 was created.

For the Waterloo group, the card files were organized in alphabetic order with one card for each juvenile with whom the Youth Bureau had come in contact. Cards were maintained for each juvenile until he or she attained the age of sixteen and passed out of the jurisdiction of the Youth Bureau. For the purposes of the study, cards were selected at a fixed interval (1 cm.) through the entire file so that a sample of 400 "Warned" subjects was chosen. If the initial choice in an interval had no recorded warnings for the relevant time period, the next card in the file on which an elegible warning did appear was chosen.

Information regarding contacts with the police was gathered for all groups using the card files of the relevant police Youth Bureau. Youth Bureau officers recorded the nature, date and disposition of each contact they had with a juvenile. For the purposes of the study, dispositions were grouped into three classes: "charged" dispositions, in which the officer had decided to lay a charge (the child might subsequently enter the Diversion program); "warned" dispositions, in which an offence had been committed, but the officer decided to caution or warn the juvenile only; "other" dispositions -- a residual category which covered a variety of occurrences for which no charge was contemplated. This latter group included missing person reports, as well

as such miscellaneous interactions with the juvenile as transporting him to an institution or questioning him about an event.

For each subject, an "instant offence" was designated for the purposes of the study. The "instant offence" for the Attendance Centre and Diversion groups was the one leading to the child's referral into the respective program. For the other groups, however, the child may have had a number of warnings or charges within the time period of the study. Where this occurred, a random selection table was used to designate one of these warnings or charges (depending on the population concerned) as the "instant offence".

The nature and date of the "instant offence" was recorded for each subject. In addition, the numbers of prior charges, warnings and "other" contacts besides the "instant offence" were recorded; the numbers of subsequent charges, warnings and "other" contacts within twelve months of the "instant offence" were recorded; and the numbers of subsequent charges, warnings and "other" contacts were recorded for the period beyond twelve months up to September, 1982. The monitored period for subjects in the Attendance Centre program and for those selected as matched subjects for the evaluation in Section 3.4 of this report was extended to January, 1983, so that all of these subjects would be monitored for at least twelve months.

It is an implication of this design that a juvenile may

be a member of more than one population in this study. This will occur because many juveniles received more than one kind of "treatment" over the two year period examined in the study.

The population profiles provided in Section 3.5 below are based on all cases for which relatively complete information was available. Of necessity, this has meant excluding the cases of juveniles who have now passed significantly beyond the age jurisdiction of the Youth Bureau, and whose card files have now been destroyed. By chance, this limitation does not affect any members of the Attendance Centre population. However it does affect between ten and fifteen per cent of the other three populations. This data limitation will have little effect for the purposes of comparing populations, since all are subject to approximately the same condition. However it should be noted that all but the Attendance Centre population in this study will be somewhat underrepresented with regard to age.

3.3 Development of Matched Samples and Measures of Recidivism

The research design adopted here to assess the effectiveness of the Attendance Centre entails a comparison of the juveniles who have completed the A.C. program with juveniles matched on selected characteristics and drawn from

three alternate treatment streams in the criminal justice system. The three alternate streams correspond to: (1) the "Diversion" stream, in which juvenile offenders agree to participate in the Waterloo Regional Diversion Programme as an alternative to court and sentencing; (2) the "Charged" stream, in which juvenile offenders are formally charged with an offence and are processed through Family Court; and (3) the "Warned" stream, in which juvenile offenders receive a formal warning or caution from the police, but no further action is taken.

The data base for this research is limited to subjects "treated" between January 1, 1980 and January 30th, 1982. Over this twenty-five month period, sixty-eight juveniles entered the "regular" Attendance Centre program, and an additional fifteen juveniles participated in the limited sense that A.C. staff attempted to find appropriate community placements for them. This latter group will not be considered in the comparative evaluation. Of the sixty-eight "regular" participants, sixty-one were deemed appropriate for the purposes of this study, in that each of these individuals had experienced at least one prior police contact, and each had remained in the program for a sufficient period (arbitrarily four weeks or more) to be considered "treated". Of the seven eliminated here, four completed less than three weeks of the program, and three had no prior police contact.

For each of these sixty-one Attendance Centre children,

a subject was matched from each of the other three treatment streams. The development of the sampling frames for these three populations is described above in Section 3.2.

The juveniles from the four populations were matched as closely as possible on the following variables: police jurisdiction (Waterloo Region or Guelph), number of prior charges and warnings, gender, age at time of "instant offence" (the offence leading to "treatment"), nature of "instant offence", date of "instant offence", and area of residence. The order in which these matching criteria are listed corresponds generally to the relative priorities accorded them in the matching process. That is, where an ideal match was not available, importance was generally given to matching first on police jurisdiction, second, on prior police record of the juvenile, third on gender, and so on. The priorizing of these variables was based on the investigator's judgement as to the relative importance of each variable as a criterion in the recidivism equation.

In Table 3.3-1, the resultant matched groups are profiled for each of the matched characteristics. Two kinds of information are provided for each of the variables. First, a summary profile of each group is provided using measures of central tendency and/or percentages. These allow one to assess the overall similarity of the four groups as aggregate units. The second kind of measure displayed for each variable attempts to quantify and summarize the degree of similarity between each Attendance Centre subject and his

Table 3.3-1 Profile of the Four Matched Comparison Groups for Selected Background Characteristics.

	Attendance Centre (N=61)	Warned Group (N=61)	Diversion Group (N=61)	Charged Group (N=61)
Police Jurisdiction				
Region of Waterloo	50	50	61	48
Guelph	11	11	0	13
# of Departures of Comparison subjects from corresponding A.C. subjects	—	0	11	2
Gender				
Male	56	57	57	57
Female	5	4	4	4
# of Departures of Comparison subjects from corresponding A.C. subjects	—	1	1	1
Age				
Mean Age of Subjects (in years)	11.3	11.6	11.9	12.2
Mean Deviation of Comparison subjects from corresponding A.C. subject	—	.7	.8	1.2
Prior Charges & Warnings				
Mean No. of Prior Charges and Warnings	2.3	2.3	2.2	2.3
Mean Deviation of Comparison subjects from corresponding A.C. subject	—	.3	.3	.3
Date of Offence				
Mean No. of months prior to January, 1983	21.7	22.9	24.5	25.0
Mean Deviation of Comparison subjects from corresponding A.C. Subject (in months)	—	5.5	6.4	8.1

Table 3.3.1 Continued . . .

	Attendance Centre (N=61)	Warned Group (N=61)	Diversion Group (N=61)	Charged Group (N=61)
Nature of Instant Offence				
Category I (minor liquor offence or fail to report)	1.6%	—	3.3%	—
Category II (minor behavioural complaint, eg. trespass, mischief)	16.4	39.3	9.8	8.2
Category III (property-related behavioural complaint, eg. wilful damage)	18.0	14.8	13.1	13.1
Category IV (petty theft)	39.3	29.5	47.5	39.3
Category V (theft over, B & E, Fraud, auto theft)	14.4	13.1	19.7	29.5
Category VI (assault & weapons offences)	8.2	3.3	6.6	8.2
Category VII (robbery & indecent assaults)	—	—	—	1.6
	100.0%	100.0%	100.0%	100.0%
Median Offence Class for Group	3.86	3.22	4.00	4.23
Mean Deviation of Comparison subjects from corresponding A.C. subject	—	.93	.98	.93
Area of Residence				
Kitchener	60.7%	52.5%	36.1%	44.3%
Waterloo	4.9	8.2	4.9	6.6
Cambridge	13.1	18.0	54.1	14.8
Waterloo Region - Rural	3.3	3.3	4.9	13.1
Guelph	18.0	18.0	—	21.3
	100.0%	100.0%	100.0%	100.0%

or her "match" in each of the three comparison groups.

The data in Table 3.3-1 suggest that the matching process in terms of these variables was largely successful. For the variables "gender" and "prior police contact", the four groups are almost identical. Similarly, the matchings by police jurisdiction and by age are confounded only by institutional constraints. Until 1982, there was no diversion program in the Guelph police jurisdiction, and thus the "Diversion" group matches for the eleven Attendance Centre subjects from Guelph were drawn from Waterloo. Regarding age, it appears that police authorities are more reluctant to lay charges with very young offenders (under ten years old); thus the "Diversion" and "Charged" groups tend to be slightly older than their Attendance Centre counterparts. Even so, the departures here are not large. The average ages of the four groups are within eleven months of each other.

Matching by "nature of instant offence" was complicated by the large number of offence classes used by the police departments and by the limited populations from which matches could be drawn. To simplify the process somewhat, offences were grouped under nine general headings, and these nine offence classes were ranked subjectively in terms of the apparent gravity of the offence. Appendix A provides a description of the offences grouped within each category.

This rating system was used to guide the selection of matched subjects from each of the comparison populations.

Where exact matches were available, they were used; when they were unavailable, matches were sought from within the same offence class. When there was no appropriate match within the class, matches were sought in contiguous offence classes.

As the appropriate section of the table reveals, the profiles of the four groups with regard to "nature of offence" are reasonably similar. The median values for the Attendance Centre and Diversion groups are very close, as are their distributions across the various classes. As one might expect, the "Warned" group is characterized by offences of a somewhat less serious nature, while the offences of the "Charged" group tend to be slightly more serious. The values of the mean deviations in the table indicate that the matched subjects from the three comparison groups tend to deviate from their Attendance Centre counterparts by less than one offence class.

"Date of instant offence" in the table is measured by the number of months passing between the offence date and January, 1983. While this variable was considered less important than some of the others, it can be seen from the table entries that deviations among the groups are not large.

"Area of residence" was deemed to be the least important among these seven matching criteria. Nevertheless, with the exception of the "Diversion" group, the matched samples manifest reasonably similar residential profiles. It can be

seen from the distribution in the table that the Attendance Centre subjects are more likely to be resident in Kitchener, reflecting the geographic location of the program's facilities. The "Diversion" group is disproportionately drawn from Cambridge relative to the other matched samples, but this geographic bias is partly a function of the population's characteristics. Almost half (46 per cent) of the juveniles in the diversion program in 1980 and 1981 were resident in Cambridge.

It is fair to conclude from this analysis that the three comparison samples are not replicas of the Attendance Centre group with regard to the matched variables. On the other hand, they are not sufficiently different on any of these variables to threaten the validity of comparisons; moreover, they are extremely similar on the variables with the highest expected relationships to the dependent measure of recidivism.

It should go without saying that there are a host of other variables which have not been matched here, and which may have an effect on future recidivism. Most of these variables, like family structure or service involvement, are probably unrelated to the "treatment" variable of interest in this research. If so, these variables would not confound the interpretation of observed differences among groups. Other variables, however, such as the juvenile's attitude toward authority, could quite conceivably be related to the "treatment" variable in this study. Given the possibility

that such uncontrolled variables may exist, any conclusions from this study about differences among groups must be suitably qualified.

The principal dependent variable in this assessment of the Attendance Centre is its success in curtailing the criminal or deviant conduct of those juveniles passing through its program. Because there is no direct measure of conduct available, the documented record of the juvenile's contacts with the police will be used as an indirect measure of the child's subsequent deportment.

The Youth Bureaus of both police departments involved in this study maintain a file for each juvenile with whom officers have come in contact. The file documents the date, nature, and disposition of all contacts with the child to the age of sixteen. For the purposes of this research, the dispositions of contacts were collapsed into three categories: "charge", "warning", and "other". This last category was treated as a residual and included many contacts in which juvenile misbehaviour was not necessarily involved. As a result, it will be ignored for the purposes of the analysis. Contacts were coded into three time periods: those occurring prior to the study "treatment", those occurring within twelve months of the initiation of the "treatment", and those occurring more than twelve months after initiation of the "treatment".

In the analysis of the following section, various measures derived from these contact data will serve as the

dependent variables in the comparison of the performance of the four matched groups.

3.4 Analysis of Recidivism Among Matched Samples

A number of measures of recidivism will be employed in this study. The first, and perhaps the "hardest" of these is the number of charges laid within twelve months of the "instant offence" which led to the initiation of treatment. This is the "hardest" measure in that it permits the most unequivocal inference of subsequent serious misbehaviour; moreover, it is based on a monitoring period that is identical for each subject.

The second measure is the number of charges or warnings accrued by the juvenile within twelve months of the "instant offence". This measure provides a more sensitive index to the child's subsequent behaviour in that it registers evidence of both serious and less serious misbehaviour. In addition, it is less subject to officer discretion.

The remaining two measures are analogous to the first two, but are based on the entire subsequent period for which the child was monitored. These measures are included to provide a longer term index to the behaviour of the subjects. However it should be recognized that the monitoring periods for these measures vary both within and

between groups. Indeed, as previously reported (see Table 3.3-1), the average monitoring period ranges between 21.7 months for the Attendance Centre group and 25.0 months for those in the "Charged" group.

Tables 3.4-1 through 3.4-4 summarize the "success" rates for each of the four matched samples on these measures, and provide a statistical summary of the comparisons among groups. Although the four tables do not reveal exactly the same patterns, a number of general conclusions might be drawn.

First, the Attendance Centre group experienced a somewhat better rate of success than did the other three groups. It is apparent from these tables that, for three of the four measures, the A.C. group had the highest proportion of juveniles remaining free of police contact. In the fourth case, it had the second highest proportion. Moreover, the Attendance Centre clients registered the lowest average rates of recidivism for each of the four measures. On the "hardest" measure of recidivism -- the number of charges laid within twelve months -- the differences between the A.C. rates and those of the other three combined are statistically significant at the .05 level.

Secondly, Palmer and Lewis (1980) among others have noted that the effects of diversion tend to be limited to the short term in which treatment is delivered. That is, recidivism tends to be delayed for diverted youths while

Table 3.4-1 Comparison of Number of Charges Incurred Within Twelve Months of Instant Offence for the Four Matched Samples.

No. of Charges	Attendance Centre N=61	Warned Group N=61	Diversion Group N=61	Charged Group N=61
No Charges Incurred	72.1%	65.6%	68.9%	63.9%
One Charge	24.6	16.4	23.0	24.6
Two Charges	1.6	11.5	6.6	6.6
Three Charges	1.6	4.9	1.6	1.6
Four or More	—	1.6	—	3.3
	100.0%	100.0%	100.0%	100.0%
Mean No. of Charges	.33	.61	.41	.56

Group Comparisons:

A.C. vs. Warned, Diversion & Charged Combined	$t = -1.96$ (df = 150.5) $p = .05$
A.C. vs. Warned	$t = -1.89$ (df = 98.7) $p = .06$
A.C. vs Diversion	$t = -.69$ (df = 117.5) $p = .48$
A.C. vs Charged	$t = -1.61$ (df = 101.7) $p = .11$

Table 3.4-2 Comparison of Number of Charges and Warnings Incurred by the Four Matched Groups Within Twelve Months.

No. of Charges and Warnings	Attendance Centre N=61	Warned Group N=61	Diversion Group N=61	Charged Group N=61
None Incurred	47.5%	37.7%	41.0%	32.8%
One Charge or Warning	13.1	24.6	26.2	29.5
Two Charges or Warnings	23.0	19.7	4.9	16.4
Three Charges or Warnings	9.8	4.9	11.5	6.6
Four or More Charges or Warnings	6.4	13.1	16.5	14.6
	100.0%	100.0%	100.0%	100.0%%
Mean No. of Charges and Warnings	1.25	1.56	1.69	1.67

Group Comparisons:

A.C. vs. Warned, Diversion & Charged Combined	$t = -1.53$ (df = 138.6) $p = .13$
A.C. vs. Warned	$t = -.93$ (df = 111.9) $p = .35$
A.C. vs Diversion	$t = -1.26$ (df = 107.4) $p = .21$
A.C. vs Charged	$t = -1.28$ (df = 111.9) $p = .20$

Table 3.4-3 Comparison of Number of Charges Incurred from Date of Instant Offence to January, 1983 for the Four Matched Samples.

No. of Charges	Attendance Centre N=61	Warned Group N=61	Diversion Group N=61	Charged Group N=61
No Charges Incurred	57.4	60.7	52.5	50.8
One Charge	27.9	13.1	21.3	29.5
Two Charges	6.6	11.5	14.8	4.9
Three Charges	4.9	9.8	8.2	6.6
Four or More	3.2	4.9	3.3	8.2
	100.0%	100.0%	100.0%	100.0%
Mean No. of Charges	.71	.85	.95	.93

Group Comparisons:

A.C. vs. Warned, Diversion & Charged Combined	$t = -1.12$ (df = 240)	$p = .26$
A.C. vs. Warned	$t = -.65$ (df = 240)	$p = .52$
A.C. vs Diversion	$t = -1.08$ (df = 240)	$p = .28$
A.C. vs Charged	$t = -1.01$ (df = 240)	$p = .31$

Table 3.4-4 Comparison of Number of Charges and Warnings Incurred by the Four Matched Groups form the Date of Instant Offence to January, 1983.

No. of Charges and Warnings	Attendance Centre N=61	Warned Group N=61	Diversion Group N=61	Charged Group N=61
None Incurred	41.0%	31.2%	36.1	23.0
One Charge or Warning	9.8	23.0	18.0	26.2
Two Charges or Warnings	14.8	16.4	6.6	18.0
Three Charges or Warnings	6.6	6.6	4.9	4.9
Four or More Charges or Warnings	27.8	22.8	34.4	27.9
	100.0%	100.0%	100.0%	100.0%
Mean No. of Charges and Warnings	2.28	2.34	2.69	2.56

Group Comparisons:

A.C. vs. Warned, Diversion & Charged Combined	$t = -.57$ (df = 240)	$p < .57$
A.C. vs. Warned	$t = -.12$ (df = 240)	$p = .90$
A.C. vs Diversion	$t = -.76$ (df = 240)	$p = .45$
A.C. vs Charged	$t = -.52$ (df = 240)	$p = .61$

they are completing treatment, but in the longer term, they "catch up" to their comparisons so that no differences are apparent.

The data in these tables tend to support at least part of this thesis. The differences in Table 3.4-1 suggest that both diversion treatments had a slight short term effect on serious recidivism. However the "delaying effect" is more clearly apparent if we compare the percentages of charged recidivists in each group who waited until the second year to commit their offence. These percentages (not shown in the table) are consistent with the assumption that diversion treatments tend to produce delays. While only 12.5 per cent of the "Warned" subjects who were subsequently charged waited until the second year to incur that charge, the comparable figures for the Attendance Centre and Diversion subjects were 31.1 per cent and 34.6 per cent respectively. The "Charged" subjects fell between these extremes at 26.1 per cent.

The second part of the "delaying" thesis that diverted subjects will "catch up" to their comparisons in the longer term finds less support here. While it is true that the short term significant differences between the A.C. and the others are not significant in the longer term, the <u>pattern</u> of differences is maintained for the most part. That is, the levelling process appears to be far from complete even after more than twenty months of monitoring. This suggests, although it does not demonstrate, that the effect of the

Attendance Centre treatment may be more than simply a delaying one.

Thirdly, the data in these tables suggest that the two diversion programs (the Attendance Centre and the Diversion groups) have approximately the same impact on recidivism. The Attendance Centre subjects have slightly less recidivism on all of the measures, but none of these differences are statistically significant.

Fourthly, the "Charged" sample appears on balance to have fared slightly worse than the others. Although the differences are seldom large enough to be statistically significant, the pattern is relatively consistent. On each of the four measures, the "Charged" sample has the smallest proportion remaining free of police contact, and has the second highest mean recidivism rate.

Finally the conclusion one might draw from these tables is that no treatment is dramatically superior or inferior to the rest. Indeed, perhaps the most striking feature of the comparisons displayed in these tables is the general lack of significant differences. In part this is due to the rather small numbers involved; but it is still the case that, after more than twenty months of monitoring, only ten percentage points separate the best and worst performances in terms of charges incurred.

The Attendance Centre program differs in important ways from the other three 'treatments". Specifically, it is

distinguished by the extensiveness and intensiveness of its intervention into the child's life. It is an intervention on a daily basis for several hours over a period of several months. Zarchikoff and Crew (1975) have suggested that programs of this nature may be most effective with those who most require a continuous steadying influence in their lives in order to effect basic attitude and behavioural change -- in short, the more difficult high risk cases.

To examine this thesis in the context of the Waterloo-Wellington project, the matched group data were reanalysed after introducing controls for several variables that might reflect the degree of adjustment required of the juvenile. Specifically, controls were introduced individually for the presence or absence of prior charges in the child's police record, for the number of prior charges and warnings in the child's record, for the age of the juvenile, and for the seriousness of the "instant offence".

Tables 3.4-5 through 3.4-7 provide a summary of the performance of these subgroups for the "hardest" measure of recidivism -- the number of charges incurred within twelve months. The pattern of differences in these tables provide some support for the thesis advanced above. The effectiveness of the Attendance Centre is most apparent among the subsets of juveniles most likely to require a radical intervention -- those who have incurred a prior charge, those who have the longest prior records of police contacts, and older juveniles, the behaviour patterns of

Table 3.4-5 Comparison of Charges Incurred Within Twelve Months for the Four Matched Samples, Broken Down (1) by the Presence or Absence of Prior Charges, and (2) by the Number of Prior Offences (Charges or Warnings).

	Attendance Centre	Warned Group	Diversion Group	Charged Group
Presence or Absence of Prior Charge				
No Prior Charge (N=49)				
Avg. No. of Subsequent Charges (12 Mos.)	.33	.39	.29	.35
% Free of Charges After 12 Months	73.5%	73.5%	75.5%	71.4%
Prior Charge (N=12)				
Avg. No. of Subsequent Charges (12 Mos.)	.33	1.50	.92	1.42
% Free of Charges After 12 Months	66.7%	33.3%	41.7%	33.3%
No. of Prior Charges and Warnings				
No Prior Offences (N=17)				
Avg. No. of Subsequent Charges (12 Mos.)	.24	.24	.35	.29
% Free of Charges After 12 Months	75.0%	88.2%	70.1%	82.4
One or Two Prior Offences (N=22)				
Avg. No. of Subsequent Charges (12 Mos.)	.26	.30	.13	.35
% Free of Charges After 12 Months	79.2%	73.9%	86.9%	65.2%
More Than 2 Priors (N=21)				
Avg. No. of Subsequent Charges (12 Mos.)	.48†	1.24*	.76	1.00
% Free of Charges After 12 Months	61.9%	38.1%	47.6%	47.6%

Note: † indicates that the performance of the A.C. sample for this measure is significantly different from the combined performance of the other three groups, using a t-test for the appropriate paired comparison, and a significance level of .05.

* indicates that the performance of this sample is significantly different from that of the A.C. sample for this measure, using a t-test for the appropriate paired comparison, and a significance level of .05.

Table 3.4-6 Comparison of Charges Incurred Within Twelve Months for the Four Matched Samples, Broken Down by the Age of the Juvenile.

Age of Juvenile	Attendance Centre	Warned Group	Diversion Group	Charged Group
10 Years or Under (N=21)				
Avg. No. of Subsequent Charges (12 Mos.)	.29	.33	.38	.33
% Free of Charges After 12 Months	81.0%	76.2%	71.4%	71.4%
11 or 12 Years (N=23)				
Avg. No. of Subsequent Charges (12 Mos.)	.39	.48	.35	.49
% Free of Charges After 12 Months	60.9%	69.6%	69.6%	69.6%
13 years or More (N=17)				
Avg. No. of Subsequent Charges (12 Mos.)	.29 †	1.12 *	.53	.94 *
% Free of Charges After 12 Months	76.5%	47.1%	64.7%	47.1%

Note: † indicates that the performance of the A.C. sample for this measure is significantly different from the combined performance of the other three groups, using a t-test for the appropriate paired comparison, and a significance level of .05.

* indicates that the performance of this sample is significantly different from that of the A.C. sample for this measure, using a t-test for the appropriate paired comparison, and a significance level of .05.

Table 3.4-7 Comparison of Charges Incurred Within Twelve Months for the Four Matched Samples, Broken Down by the Nature of the Instant Offence.

Nature of Offence	Attendance Centre	Warned Group	Diversion Group	Charged Group
Category I - III (least serious) (N=22)				
Avg. No. of Subsequent Charges (12 Mos.)	.27	.54	.27	.41
% Free of Charges After 12 Months	77.3%	63.6%	77.3%	68.2%
Category IV (theft under & Shoplifting) (N=23)				
Avg. No. of Subsequent Charges (12 Mos.)	.17 †	.65 *	.43	.78 *
% Free of Charges After 12 Months	82.6%	65.2%	65.2%	60.9%
Category V or More (more serious offences) (N=16)				
Avg. No. of Subsequent Charges (12 Mos.)	.63	.63	.56	.44
% Free of Charges After 12 Months	50.0%	68.8%	62.5%	62.5%

Note: † indicates that the performance of the A.C. sample for this measure is significantly different from the combined performance of the other three groups, using a t-test for the appropriate paired comparison, and a significance level of .05.

* indicates that the performance of this sample is significantly different from that of the A.C. sample for this measure, using a t-test for the appropriate paired comparison, and a significance level of .05.

Note: See Section 3.3 and Appendix A for a more complete description of the offence classification used here.

whom one might expect to be more established. The predicted pattern for these variables is rather consistently manifested throughout these summary tables. Moreover, the differences in many cases are sufficiently dramatic to be statistically significant, despite much reduced numbers.

The only exception to this pattern is found with comparisons controlled for the nature of the offence. In this case, it appears that the relative effectiveness of the Attendance Centre is with juveniles whose "instant offence" involved petty theft.

As noted in the description of the Attendance Centre Program (see Section 1.0), the first year of the program, 1980, was considered a developmental period by the directors. It was not until the beginning of 1981 that they were satisfied with the program content and with their linkages to the police and to the larger community. Thus it might be appropriate to examine the effectiveness of the program separately in its developmental and established stages.

Table 3.4-8 provides recidivism data broken down by year of treatment. It appears from this table that the second year of operation was comparatively more successful than the first. Certainly the "success rate" itself is considerably higher in 1981 than in 1980, but this is partly a function of the kind of referrals they received in the two years. The 1980 cohorts had significantly more prior police

Table 3.4-8 Comparison of Charges Incurred Within Twelve Months for the Four Matched Samples, Broken Down (1) by the Cohort Year of the Attendance Centre Referral and (2) by the Sex of the A.C. referral.

	Attendance Centre	Warned Group	Diversion Group	Charged Group
Year of Treatment				
1980 Cohort (N=24)				
Avg. No. of Subsequent Charges (12 Mos.)	.50	.88	.50	.92
% Free of Charges After 12 Months	58.3%	54.2%	66.7%	50.0%
1981 Cohort (N=37)				
Avg. No. of Subsequent Charges (12 Mos.)	.22	.43	.35	.32
% Free of Charges After 12 Months	81.1%	73.0%	70.3%	73.0%
Sex of Referral				
Male (N=56)				
Avg. No. of Subsequent Charges (12 Mos.)	.32	.55	.43	.55
% Free of Charges After 12 Months	73.2%	67.9%	67.9%	66.1%
Female (N=5)				
Avg. No. of Subsequent Charges (12 Mos.)	.40	1.20	.20	.60
% Free of Charges After 12 Months	60.0%	40.0%	80.0%	40.0%

Note: † indicates that the performance of the A.C. sample for this measure is significantly different from the combined performance of the other three groups, using a t-test for the appropriate paired comparison, and a significance level of .05.

* indicates that the performance of this sample is significantly different from that of the A.C. sample for this measure, using a t-test for the appropriate paired comparison, and a significance level of .05.

contacts than those in 1981 (4 versus 2 on average). The more important index of success here is the performance of the A.C. juveniles in each of the two years relative to their matched counterparts in the other treatments. These matched comparisons reveal that the Attendance Centre in 1980 was in no way more successful than the other treatments. In 1981, however, the Attendance Centre subjects exhibited less recidivism on both twelve month measures. The differences are not statistically significant given the small numbers, but the pattern is most suggestive.

Finally the second part of Table 3.4-8 provides a breakdown of recidivism by gender. The number of girls admitted to the Attendance Centre program in its first two years was very small. Thus little relevant information can be gleaned from these matched group comparisons.

In summary, this comparison of recidivism between the Attendance Centre referrals and the matched subjects from the other three treatment streams suggests that the Centre has had some impact in reducing the delinquent behaviour of those passing through its program. Statistically significant differences were found in comparing the incidence of charges incurred within twelve months, but the pattern of marginal superiority for the A.C. was maintained for almost all other recidivism measures as well. Although the findings are only suggestive, there is some evidence that these differences might sharpen in future as more

clients pass through the program and the relative contribution of the "developmental stage" cohorts of 1980 diminishes in size.

Although there are no subgroups of clients for whom the A.C. program is demonstrably ineffective, the forte of the program appears to be with relatively "high risk" clients. The success rates with these individuals were understandably lower than with the low risk juveniles, but they were considerably higher than that experienced in the other three groups.

3.5 Profiles of the Populations

The profiles developed in this section of the report are based on data collected for each of six populations: the Attendance Centre, the Waterloo Diversion, the Waterloo "Charged", the Waterloo "Warned", the Guelph "Charged", and the Guelph "Warned" populations. The procedures employed in collecting these data are described in Section 3.2. Subject to the limitations discussed in that earlier section, this analysis should provide an adequate picture of the juveniles who were members of each population at some point during the period beginning January, 1980 to December, 1981.

Age. Table 3.5-1 provides a summary profile of the background characteristics of the six populations. In terms

Table 3.5-1 Statistical Profile of the Parent Populations from which the Matched Samples were drawn, for Age, Gender, Area of Residence, Prior Police Record and Period Monitored.

	A.C. Pop. (N=61)	Wat. Warned Sample (N=400)	Guelph Warned Sample (N=230)	Diver-sion Pop. (N=376)	Wat. Charged Pop. (N=411)	Guelph Charged Pop. (N=129)
Age of Juvenile in Years						
Mean	11.3	13.2	13.1	13.9	14.5	14.3
S. D.	1.6	2.6	2.5	1.4	1.2	.9
Gender of Juvenile						
Male	91.8%	76.8%	77.0%	82.2%	84.9%	80.6%
Female	8.2%	23.3%	23.0%	17.8%	15.1%	19.4%
Area of Residence						
Kitchener	60.7%	46.5%	-----	38.6%	51.6%	-----
Waterloo	4.9	16.3	-----	8.2	12.7	-----
Cambridge	13.1	30.5	-----	46.5	23.1	-----
Rural Region	3.3	6.8	-----	6.6	12.7	-----
Guelph	18.0	-----	100.0	-----	-----	100.0
No. of Prior Charges and Warnings						
Mean	2.3	1.3	.9	1.7	4.6	3.2
S. D.	2.9	3.2	1.6	2.2	5.0	3.9
No. of Months Monitored Since Instant Offence						
Mean	21.7	17.9	17.9	19.6	17.6	19.1
S. D.	6.6	6.7	6.8	6.6	7.9	7.5

of age differences, the Attendance Centre referrals are clearly distinguished by their relative youth. The A.C. population has an average age that is about two years younger than the next youngest group. Among the others, the observed pattern confirms in practice the principle that younger offenders should be treated less formally and less punitively than older ones. The "Warned" samples tend to be younger than the Diversion population, and it in turn tends to be younger than the two "Charged" groups.

It is interesting to note that there are no apparent age differences in juvenile offenders between Waterloo Region and the City of Guelph. In addition, it appears that the two Youth Bureaus tend to use the same yardstick in deciding whether to warn or charge a juvenile.

Gender. In general, there are few differences in the gender composition of the six populations. Clearly, males constitute the bulk of youthful offenders, comprising in the neighbourhood of four-fifths of each population. In both the Guelph and the Waterloo jurisdictions, girls are more likely than boys to be warned rather than charged; however the differences here are not great and may easily reflect differences in their respective police records, or in the seriousness of their respective offences.

Area of Residence. The four Waterloo populations do manifest some differences in residential composition. The

A.C. distribution reflects the geographic location of the program's facilities in the Kitchener area. Of the other three populations, two are approximately proportionate to the size of the communities from which they were drawn. The Diversion population, however, appears to be drawn disproportionately from the Cambridge area of the Region.

Prior Police Record. To what extent does prior police record distinguish these populations? Table 3.5-1 suggests that there are important but largely predictable differences. The Attendance Centre was designed as an early prevention program for children who seemed to be developing a pattern of delinquency. The summary statistics regarding prior record indicate that the typical referral to the A.C. program fits this description rather well. While few of these juveniles had been charged before (14.5 per cent), most (74.8 per cent) had at least one prior warning, and the typical referral had accumulated more than two.

Among the other groups, a principle of graduated response seems to inform the choice among options for Youth Bureau officers. In both the Region of Waterloo and the City of Guelph, the "warning" option tends to be used with first offenders and those with a relatively few number of warnings. The "Charged" groups, on the other hand, include very few first offenders. The typical referral to the courts tends to have between 3.2 (Guelph) and 4.6 (Waterloo) prior charges or warnings. The Diversion option falls

between these extremes. While very few Diversion clients have prior charges on their record, most (65 per cent) have been in trouble before, and average under two prior warnings or charges.

The rather dramatic difference between the Guelph and Waterloo "Charged" groups regarding number of prior offences is in large part explained by the availability of the diversion option to the Waterloo Region Youth Bureau. When the Diversion group is combined with the Region's "Charged" group, the average number of prior warnings or charges in the latter (3.25) becomes comparable to that found in Guelph (3.19). Similarly with Diversion included with the Charged, the proportion previously free of charges in the Region (69 per cent) also becomes more comparable to the Guelph statistic (66.7 per cent).

Months Monitored. Finally, in Table 3.5-1, the length of the monitoring period is displayed. It can be seen that the Attendance Centre population was followed for a longer period than the others because each of these referrals was of course included in the matched comparison analysis of the previous section. It should be noted that not all of the subjects from the other populations were followed for a full twelve months after their "instant offence". Those committing their offence between October and December, 1981 would have been monitored for somewhat less than a year since the monitoring was completed in September, 1982. Thus

in the profile of recidivism provided below, the twelve month measures for the comparison populations will be slightly undervalued.

Nature of Offence. Table 3.5-2 provides for each of the six populations a comparative profile of the offence treated as the "instant offence" for the purposes of this study. The reliability of these data is relatively comparable and relatively high for all but the Waterloo "Warned" population. For this latter group, classification of the offence could be based only on the description provided in the police records. Experience with the other groups (for which a second source of offence information was available) suggests that the Waterloo police personnel frequently use a general offence code ("Children's Complaint", "Police Information") which places the offence in Category II in the table. A more complete description of the offence might well have caused some of these contacts to be reclassified elsewhere.

The pattern evident in Table 3.5-2 is much the same as that found in profiling the prior police records of the various populations. The offences of the Attendance Centre population tend to be somewhat more serious than those in the "Warned" groups, but considerably less serious than those found in in the "Charged" groups. Consistent with the view of diversion as an alternative to court and sentencing, the offences of the Diversion population tend to

Table 3.5-2 Statistical Profile of the Parent Populations from which the Matched Samples were drawn, for Nature of Instant Offence.

	A.C. Pop. (N=61)	Wat. Warned Sample (N=400)	Guelph Warned Sample (N=230)	Diversion Pop. (N=376)	Wat. Charged Pop. (N=411)	Guelph Charged Pop. (N=129)
Nature of Instant Offence						
Category I (minor liquor offence or failure to report)	1.6%	2.3%	6.1%	3.7%	4.6%	9.3%
Category II (minor behavioural complaint, eg. trespass, mischief)	16.4	38.5	19.6	6.4	4.4	5.4
Category III (property-related behavioural complaint, eg. wilful damage)	18.0	12.3	17.4	12.2	11.5	4.8
Category IV (petty theft)	39.3	29.6	36.5	43.3	33.1	31.8
Category V (theft over, B & E, Fraud, auto theft)	14.4	6.4	12.2	28.2	35.8	36.4
Category VI (assaults & weapons offences)	8.2	8.0	7.4	4.3	5.8	7.8
Category VII (robbery & indecent acts)	——	.8	.9	.8	3.8	4.1
Category VIII (drug trafficking)	——	.3	——	1.1	1.0	——
Category IX (unclassified)	——	2.3	——	——	.5	——
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Median Offence Category for Each Group	3.86	3.25	3.69	4.20	4.39	4.46

Note: See Section 3.3 and Appendix A for a description of this offence classification.

be only slightly less serious than those for whom charges were processed.

Once again, the similarities between the Guelph and Waterloo populations merit comment. With the exception of the probable overuse of Category II in the Waterloo "Warned" distribution, the respective profiles of the "Warned" and "Charged" samples in the two jurisdictions are sufficiently similar to render any differences statistically insignificant.

Recidivism. Table 3.5-3 provides a summary profile of the six populations in terms of the recidivism experienced in each. Given the different compositions of the populations, the observed differences here are in many respects predictable.

The "Warned" samples exhibit the lowest levels of recidivism for all indices. Fully 90 per cent of each "Warned" group remained free of charges after one year, and more than three in four had no further contact with the police over the year and a half in which they were monitored.

Just as consistently, the Diversion population ranked third among the six groups over all measures. Three of every four of these juveniles were not charged again, and over half (54 per cent) had no further police contact. Finally the two "Charged" groups manifest approximately the same success rates ranking at the bottom of these

Table 3.5-3 Statistical Profile of the Parent Populations from which the Matched Samples were drawn, for various Recidivism Measures.

	A.C. Pop. (N=61)	Wat. Warned Sample (N=400)	Guelph Warned Sample (N=230)	Diver-sion Pop. (N=376)	Wat. Charged Pop. (N=411)	Guelph Charged Pop. (N=129)
Charges Within Year						
Mean No. of Charges	.33	.19	.16	.27	.77	.48
% Free of Charges	72.1%	89.8%	93.0%	81.4%	70.1%	72.1%
Charges or Warnings Within Year						
Mean No. of Ch. & W.	1.25	.44	.50	.93	1.77	1.1
% Free of Ch. & W.	47.5%	80.5%	78.3%	59.6%	48.2%	48.8
Charges Since Referral						
Mean No. of Charges	.71	.23	.19	.40	.85	.54
% Free of Charges	57.4%	87.3%	92.6%	75.5%	66.7%	67.4%
Charges or Warnings Since Referral						
Mean No. of Ch. & W.	2.28	.58	.62	1.22	1.96	1.30
% Free of CH. & W.	41.0%	76.3%	76.5%	54.8%	45.3%	44.2%

conventional treatment streams.

The performance of the Attendance Centre population warrants closer scrutiny. While performing marginally better than the matched comparisons from the other treatment streams (see Section 3.4), the A.C. referrals in this analysis fare less well when compared to the parent populations of these alternatives. In general they exhibit a pattern that is markedly worse than the "Warned" samples, somewhat worse than the Diversion population, and only comparable or perhaps marginally better than the "Charged" groups.

In large part, the explanation for this unfavourable comparison lies in the differences in prior records that characterize the different populations. It was noted above that the prior records of the A.C. referrals are exceeded in length only by those of the "Charged" groups.

To illustrate the effect of these differing police histories on the recidivism profiles of the populations, Table 3.5-4 displays the basic summary measure of recidivism for individuals with different kinds of prior records.

It can be seen from this table that the positive performance of the two "Warned" samples is primarily due to the preponderance of first offenders in their ranks. Individuals with more than two prior offences who were warned by police exhibit higher recidivism rates than the A.C. population and higher rates than most other groups as well. Similarly the differences between the Diversion and

Table 3.5-4 Recidivism Within Twelve Months for each of the Parent Populations, Broken down by Juvenile's Prior Police Record.

	A.C. Pop. (N=61)	Wat. Warned Sample (N=400)	Guelph Warned Sample (N=230)	Diver-sion Pop. (N=376)	Wat. Charged Pop. (N=411)	Guelph Charged Pop. (N=129)
Charges Within Twelve Months						
First Offenders						
Mean No. of Charges	.25	.05	.10	.13	.38	.36
% Free of Charges	75.0%	95.8%	97.0%	88.6%	76.7%	68.2%
One or Two Prior Offences						
Mean No. of Charges	.25	.13	.05	.29	.40	.54
% Free of Charges	79.2%	90.4%	95.5%	82.5%	78.0%	73.1%
More Than Two Prior Offences						
Mean No. of Charges	.48	.88	.69	.43	.62	.47
% Free of Charges	61.9%	60.7%	69.0%	69.2%	65.2%	72.7%

A.C. groups are less pronounced when prior police record is considered.

These statistical profiles provide pictures of the four basic populations that are largely consistent with conventional assumptions in the literature. Clearly the backgrounds of the various groups are dramatically different in many respects. Thus it is not possible to draw inferences about the comparative effectiveness of these different options without a much more extensive and sophisticated analysis.

4. Implications and Conclusions

The fortunes of "diversion" as an alternative to more formal processes within the criminal justice system have come almost a full circle in the past fifteen years. The first five years of this period were characterized by an atmosphere of considerable optimism as diversion projects were introduced across the continent. There followed a period during the early 1970s of partial disillusionment with the concept as the first evaluations of these programs revealed their very modest and at times negligible effects on their juvenile clientele. More recent approaches to diversion seem to be based on the more realistic premises first that diversion is not a panacea for juvenile delinquency, and second, that specific diversion programs will not be equally effective with all kinds of juveniles -- that there is a need for diverse approaches and content.

The present research regarding the Waterloo-Wellington Attendance Centre yields conclusions that are consistent with this last view. It does appear that the juveniles who passed through this program in its first two years exhibited less recidivism than other juveniles of similar background and circumstnaces who did not. The program may have been responsible for this improvement. Unfortunately, a quasi-experimental design of the kind employed here cannot establish this with confidence. While the matched subjects

were carefully selected to reflect important objective characteristics of the A.C. referrals, one cannot discount an alternate explanation in terms of such variables as the possible differences in attitude between youths entering this voluntary program and those channelled elsewhere. Mitigating against this latter possibility is the finding that the A.C. referrals tended to outperform the matched comparisons who were simply warned and released.

This finding is generally consistent with those reported for a similar project in Burnaby, B.C. (Zarchikoff and Crew, 1975). It is inconsistent, however, with Byles' (1981) findings in Hamilton, Ontario. Two major differences distinguish the Waterloo-Wellington project from the Hamilton experiment. First, the juveniles referred to the Hamilton project were ordered there by the court so that participation was involuntary. Secondly, these juveniles represented the most difficult high risk cases on the caseloads of area Probation officers. Since either of these differences might account for the differentiated "success" rates in the two communities, it is difficult to draw conclusions.

While the Waterloo-Wellington Attendance Centre appeared to have an impact on its clients, it should be noted that the overall differences between treatment and comparison groups were certainly not dramatic. Only one of four measures of recidivism yielded differences that were statistically significant. Moreover, in individual paired

comparisons, the A.C. group did not significantly outperform its matched comparisons from the Waterloo Diversion program for any of the measures examined. Thus its "success" must be understood in the context of a marginal improvement in the subsequent behaviour of its clientele.

As noted above, diversion theorists in recent years have stressed the thesis that no one diversion formula will adequately serve the needs of the juvenile client population -- that the task of evaluators ought to focus less on global comparisons of success, and more on the isolation of successful combinations of program elements and client types.

The research design employed here permits only a limited contribution to this identification process. Small numbers and relatively few background and program variables allow little more than speculation on most matters. Nevertheless, one dominant pattern in the findings is sufficiently suggestive to warrant comment.

While the Attendance Centre program in Waterloo is designed as a pretrial early prevention program, its unique impact appears to be greatest for clients who might be regarded as moderate or high risk juveniles. It is quite successful with young first and second offenders, but the other treatment strategies tend to be just as successful with these kind of children. The older children (13 years or older), those with longer police records, and those with prior charges have done well in the Attendance Centre

program relative to their matched counterparts. Byles' findings suggest that this effectiveness may not extend to juveniles in the highest risk group (those "not making it" on probation), but there is certainly no paucity of potential clients between these two extremes.

For program directors, the decision to focus more on higher risk juveniles may well be a difficult one because it will likely result in lower success levels; moreover, it may not be effective at all if the present performance is in some way a function of the current mix of high and low risk children.

There is a limit to what the experiences of sixty-one juveniles in one program can tell us about a complex process. Future studies should probably broaden the range of effectiveness criteria examined. While recidivism will remain the primary interest of directors and funding agencies alike, other aspects such as the academic performance, the self concept, and the attitude of the juvenile are relevant to assessing both the objectives and the processes of the program.

Future studies of a longer term period would prove valuable in addressing several points raised only as speculation here. The larger numbers of cases in a longer term study would permit a more complete understanding of the interactions between client characteristics and program elements. Such a study might shed light on the question of subsequent adult recidivism for children entering these

various treatment streams.

Finally, with specific reference to the Waterloo-Wellington experiment, a longer term study would indicate whether the improved success rate between 1980 and 1981 was real or illusory. If the success rate of the program has maintained its 1981 level through subsequent cohorts, the Attendance Centre would warrant a much more positive assessment relative to the alternatives.

Appendix A

Classification of Offences

Category I	- liquor offences - failure to report
Category II	- trespass - mischief - disturbance - false alarm - telephone harrassment - juvenile complaint - discharge air gun - driving offences
Category III	- wilful damage - attempted theft - firesetting - possession of stolen goods - possession of narcotics
Category IV	- theft under $200 - shoplifting
Category V	- Break & Enter - theft over $200 - fraud - taking auto without consent
Category VI	- common assault - possession of weapon
Category VII	- robbery - indecent act - indecent assault
Category VIII	- trafficking in narcotics
Category IX	- unspecified or miscellaneous offences

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